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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR    | ATTORNEY DOCKET NO.            | CONFIRMATION NO.       |
|--|-------------|-------------------------|--------------------------------|------------------------|
| 10/796,235   | 03/09/2004  | Michael Charles Shelton | 71626 US03                     | 2129                   |
| 7590   | 05/16/2007  |                         |                                |                        |
| Eastman Chemical Company<br>P.O. Box 511<br>Kingsport, TN 37662-5075 |             |                         | EXAMINER<br>HAIDER, SAIRA BANO |                        |
|  |             |                         | ART UNIT<br>1711               | PAPER NUMBER           |
|  |             |                         | MAIL DATE<br>05/16/2007        | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |
|------------------------------|------------------------|---------------------|
|                              | 10/796,235             | SHELTON ET AL.      |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |
|                              | Saira Haider           | 1711                |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 20 February 2007.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-64 is/are pending in the application.  
4a) Of the above claim(s) 2-4, 6-13, 18 and 42-64 is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 1, 5, 14-17, 19-41 is/are rejected.  
7)  Claim(s) \_\_\_\_\_ is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892) 4)  Interview Summary (PTO-413)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948) Paper No(s)/Mail Date. \_\_\_\_.  
3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 3/22/07, 10/5/04 & 5/14/04. 5)  Notice of Informal Patent Application  
6)  Other: \_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election with traverse of Group I, Claims 1-46 in the reply filed on 09/26/2006 is acknowledged. Additionally, applicant's election with traverse of the species reading claims 5, 19, 36-38, and the election of the following additives: leveling, rheology, and flow control agents is acknowledged. The traversal is on the ground(s) that a search burden does not exist. This is not found persuasive because of the intermediate-final product relationship of the various inventions as well as the different modes of operation of the various inventions. Thus, it is the examiner's position that indeed a search burden does exist. The requirement is still deemed proper and is therefore made FINAL.

2. Claims 2-4, 6-13, 18, 42-64 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected inventions and species there being no allowable generic or linking claim.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 5, 14-17, 19-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen et al. (US 5,668,273).

5. Allen discloses carboxymethyl cellulose esters, specifically a carboxymethyl cellulose acetate butyrate (CMCAB) having: a degree of substitution per anhydroglucose unit (DS/AGU) of

carboxymethyl of 0.20 to 0.75, a DS/AGU of hydroxyl from about 0.10 to 0.70, a DS/AGU of butyryl of about 0.10 to 2.60 and a DS/AGU of acetyl of 0.10 to 1.65, and having an inherent viscosity of 0.20 to 0.70 dL/g, as measured in a 60/40 (wt./wt.) solution of phenol/tetrachloroethane at 25 °C (col. 2, line 66 to col. 3, line 45).

6. The Allen reference fails to anticipate the claimed inherent viscosity range of 0.05 to 0.18 dL/g (or the claimed range of 0.07 to 0.13, as per claim 39), and the reference fails to disclose the claimed molecular weight and polydispersity values.

7. In reference to the inherent viscosity range, it is noted that the Allen reference discloses a lower limit of 0.20 dL/g, wherein it is the examiner's position that one skilled in the art would have expected the composition of the Allen reference to have the same properties as the claimed composition. Additionally, a difference of 0.02 dL/g (or a difference of 0.07 dL/g) in the inherent viscosity is not expected to change the properties of the composition. It has been held that a *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties.

*Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985).

8. In reference to the claimed molecular weight and polydispersity values, it is noted that one of ordinary skill in the art recognizes that a reduction in the viscosity indicates a reduction in the molecular weight. Thus, the molecular weight is considered an inherent property of the aforementioned prior art composition. Thus, in view of the structural, chemical and viscosity similarities of the claimed composition that that of the prior art, the properties [molecular weights, polydispersity, acid number (claims 14-17), and clear solution formation (claims 20-35)] applicant claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Note, that because the references do not expressly teach or address the properties of the

claimed invention, it does not mean that the properties are not inherently disclosed. Teaching the same compound(s) inherently discloses the corresponding properties. The references cannot possibly teach or address all of the properties, but implicitly all of the properties are present.

9. Once a reference teaching product appearing to be substantially identical is made the basis of a rejection, and the examiner presents evidence or reasoning tending to show inherency, as done above, the burden shifts to the applicant to show an unobvious difference. See MPEP § 2112.

10. Claims 1, 5, 14-17, 19-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Obie (WO 01/35719 A2).

11. Obie discloses carboxymethyl cellulose esters, specifically a carboxymethyl cellulose acetate butyrate (CMCAB) having: a degree of substitution per anhydroglucose unit (DS/AGU) of carboxymethyl of 0.20 to 0.75, a DS/AGU of hydroxyl from about 0.10 to 0.70, a DS/AGU of butyryl of about 0.10 to 2.60 and a DS/AGU of acetyl of 0.10 to 1.65, and having an inherent viscosity of 0.20 to 1.70 dL/g, as measured in a 60/40 (wt./wt.) solution of phenol/tetrachloroethane at 25 °C (page 7, 2<sup>nd</sup> full paragraph).

12. The Obie reference fails to anticipate the claimed inherent viscosity range of 0.05 to 0.18 dL/g (or the claimed range of 0.07 to 0.13, as per claim 39), and the reference fails to disclose the claimed molecular weight and polydispersity values.

13. In reference to the inherent viscosity range, it is noted that the Allen reference discloses a lower limit of 0.20 dL/g, wherein it is the examiner's position that one skilled in the art would have expected the composition of the Allen reference to have the same properties as the claimed composition. Additionally, a difference of 0.02 dL/g (or a difference of 0.07 dL/g) in the inherent viscosity is not expected to change the properties of the composition. It has been held that a *prima*

*facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985).

14. In reference to the claimed molecular weight and polydispersity values, it is noted that one of ordinary skill in the art recognizes that a reduction in the viscosity indicates a reduction in the molecular weight. Thus, the molecular weight is considered an inherent property of the aforementioned prior art composition. Thus, in view of the structural, chemical and viscosity similarities of the claimed composition that that of the prior art, the properties [molecular weights, polydispersity, acid number (claims 14-17), and clear solution formation (claims 20-35)] applicant claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Note, that because the references do not expressly teach or address the properties of the claimed invention, it does not mean that the properties are not inherently disclosed. Teaching the same compound(s) inherently discloses the corresponding properties. The references cannot possibly teach or address all of the properties, but implicitly all of the properties are present.

15. Once a reference teaching product appearing to be substantially identical is made the basis of a rejection, and the examiner presents evidence or reasoning tending to show inherency, as done above, the burden shifts to the applicant to show an unobvious difference. See MPEP § 2112.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saira Haider whose telephone number is (571) 272-3553. The examiner can normally be reached on Monday-Friday from 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Saira Haider  
Examiner  
Art Unit 1711



James J. Seidleck  
Supervisory Patent Examiner  
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